

**CRAB ORCHARD NATIONAL WILDLIFE REFUGE CERCLA PROJECT
MONTHLY PROGRESS REPORT
OCTOBER 2017**

**ADDITIONAL AND UNCHARACTERIZED SITES
OPERABLE UNIT (AUS OU)**

1.0 Actions toward Achieving Compliance

Feasibility Study (FS).

FWS continues to provide technical direction to Shannon and Wilson (S&W) on the draft FS. FWS and DOI comments were provided to S&W on the second revised draft pilot FS. The draft pilot FS was made available for download to the Agencies on October 7th. The draft pilot includes a comparative analysis of alternatives for AUS Sites 0001, 0002, 0060, and 0A2B and technical memoranda attached as appendices. Comments were requested from the agencies by November 17th. FWS hosted a conference call with S&W, USGS, and SIU to discuss methods for evaluating groundwater plume durations for monitored natural attenuation on October 10th.

Natural Attenuation in Groundwater Work Plan and Quality Assurance Project Plan (QAPP) Addendum.

The revised QAPP was approved by USEPA on October 4th. Additional data will be collected to evaluate natural attenuation processes in selected contaminated groundwater plumes at the AUS OU. The purpose of the data collection is to further inform alternative analysis in the FS. Data collection will be conducted over a two month period beginning in November. An addendum to the QAPP will be submitted for analysis of additional parameters (C14, VOC, nitrate, and sulfate) for USEPA approval.

Stream Water Quality Workshop.

FWS and USGS are hosting a stream water quality workshop on January 23rd to identify environmental consequences of long term loading of nitrate, sulfate, or acid rock drainage (low pH, sulfate, heavy metals) from groundwater sources into several streams on the Refuge. Discussions will include prioritization of methods and data gaps to confirm if there are any water-quality or ecological problems from the contaminant loading and monitor conditions.

Sewer Line Vapor Threat Evaluation of Area 11.

An evaluation was conducted for Area 11 to determine whether the abandoned sewer line system is acting as a potential conduit for migration of contaminated vapors and/or groundwater plumes to other areas on the Refuge. Soil gas samples confirmed vapors within the abandoned sewer line near AUS OU A11S. A technical memo is being prepared.

Radiological Surveys.

Depleted uranium was historically used on-site. Groundwater was collected from select wells and surface water at AUS Sites 0A2D, 0A09, 0A10, A11, and 0A12 during July, 2017. Some radioisotopes were detected at some locations slightly above reference stations for the survey. A report is being prepared to summarize the results of testing for radiological contamination.

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Draft Evaluation of Groundwater Risk

FWS received technical comments on the draft Evaluation of Future Groundwater Risks from USACE and Illinois EPA on October 24th. The risk assessment was designed to augment the human health risk assessment and the ecological risk assessment. The results indicated risks for human and ecological receptors and pathways related to potable and non-potable uses associated with the purposes of the Federal facility including conservation, recreation, industrial, and agricultural. The risk information supplements the applicable ARAR for the State promulgated groundwater quality standards that are mostly related to protecting potable uses.

Time Critical Removal Action for Building S-2-5

FWS conducted field activities for the time critical removal action for Building S-2-5 from October 2nd – 4th, 2017 to secure the building to mitigate the threat of further releases of hazardous substances into the environment from the interior of a building and to prevent access to the site. Concentrations of heavy metals in the dust in the interior of the building and in soils are above thresholds that pose risks to human health and the environment. The response action included inspection of the building integrity, closure of a drain hole and openings in exterior walls, boarding of windows, installation of fence and signage, and continued access restrictions.

Public Involvement Activities

FWS published a legal notice in the Southern Illinoisan on October 6th announcing the availability of updates to the Administrative Record for the Time Critical Removal Action at Building S-2-5 in Area 4 West and completion of the on-site activities. FWS continues to update the Community Involvement Plan.

2.0 Status/Results of Sampling, Tests, and Other Data

Soil gas samples were collected for VOC analyses and groundwater and surface water samples were collected for radiological testing the week of July 17th.

3.0 Actions Scheduled for Next Month

- Revise the AUS 0001 Technical Memo.
- Submit technical memos for the sewer line vapor threat evaluation/radiological survey and time critical response activities at Building S-2-5 in Area 4 West.
- Conduct monitored natural attenuation bench study.
- Submit revised QAPP for Monitored Natural Attenuation to include testing of additional parameters.
- Review and respond to agency comments submitted on Future Groundwater Evaluation of Risks, draft pilot FS, and technical memos.
- Continue to provide technical direction to S&W on preparation of the FS.
- Update the Community Involvement Plan.

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4.0 Modification or Delays Encountered or Anticipated

Completion of the draft FS will proceed per the AUS OU SOW and is targeted for Spring 2018. The draft FS will incorporate the results of the monitored natural attenuation bench study.

5.0 Other Significant Activities

None to report.

6.0 Personnel Changes

Beginning October 1st, FWS has retained technical services from SRS for technical review of the FS. AECOM will provide technical assistance for ecological and groundwater risk matters.

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**AREA 7 PESTICIDES NON-TIME CRITICAL REMOVAL ACTION
ENGINEERING EVALUATION / COST ANALYSIS (EE/CA)**

1.0 Actions toward Achieving Compliance

EE/CA Report

The Draft Final EE/CA Report and written response to comments to the draft EE/CA (June 27, 2017) were made available for download to the Agencies on October 27th. A meeting was scheduled with the Agencies for November 7th in Chicago to discuss and respond to Agency comments. FWS continues to provide technical direction to TRC on preparation of the draft EE/CA.

Public Involvement Activities

FWS continues to update the Community Involvement Plan.

2.0 Status/Results of Sampling, Tests, and Other Data

None to report.

3.0 Actions Scheduled for Next Month

- Participate in a meeting/conference call on November 7th to discuss Agency comments on the EE/CA.
- Complete the Community Involvement Plan and begin preparation of fact sheet for the EE/CA. An open house/public meeting is tentatively scheduled for January 24th.

4.0 Modification or Delays Encountered or Anticipated

Agency comments which re-consider risk assessment assumptions previously vetted will result in delay of completion of the EE/CA Report.

5.0 Other Significant Activities

None to report.

6.0 Personnel Changes

Beginning October 1st, FWS has retained technical services from SRS for technical review of the EE/CA.